

### **REMARKS**

Claims 1-10 and new Claims 11-14 remain active in the case. Reconsideration is respectfully requested.

Applicants' representative wishes to thank Examiner Cooke for the helpful discussion of June 4, 2003. As a result of the discussion, it is believed that the issues in the case have been clarified and that the prosecution of the case has been materially advanced.

#### **Claim Amendments**

Claim 1 has been amended by placing the limitations of Claim 3 therein with the exception of the (meth)acrylic resins, and Claim 3 has been canceled. Claims 2 and 4-9 have been amended as to matters of form, with none of the amendments believed to have raised an issue of new matter.

New Claims 11-14 have been added and are supported by page 6, lines 5-6 and 17-18 and page 9, lines 6-9 and 13-15. Entry of the amendments into the record is respectfully requested.

#### **Claim Rejection, 35 USC 112**

Claim 8 has been amended to indicate that the slurry employed in the process is none other than the slurry as defined in Claim 1. Accordingly, the issue that has been raised is obviated and withdrawal of the rejection is respectfully requested.

#### **Invention**

The discovery of the present invention is a slurry that contains a particulate zeolite which

has the advantages of not having an excessively high viscosity despite a large content of zeolite and binder, and further has a pH at which the zeolite and binder are stable which thereby enable stable, long term storage. As now defined in Claim 1, the slurry of the present invention comprises a zeolite and an organic emulsion binder that is selected from the group consisting of vinyl acetate resins, (meth)acrylic-styrene copolymer resins, styrene-butadiene copolymer resins, ethylene-vinyl acetate copolymer resins and styrene-acrylonitrile-alkyl (meth)acrylate copolymer resins dispersed in water. The slurry, upon contact with a carrier, achieves support of the zeolite on the carrier.

#### Prior Art Rejection, 35 USC 102

Claims 1-3 and 5-7 stand rejected based on 35 USC 102 as anticipated by Lachman, U.S. Patent 4,657,880. This ground of rejection is respectfully traversed.

As indicated in the discussion of the interview, applicants have now amended Claim 1 by incorporating the subject matter of Claim 3 therein, thereby limiting the claim to the specific resins recited in Claim 3 except for the (meth)acrylic resin material of the claim. Although the Lachman disclosure describes a slurry that contains a porous oxide material together with an organic binder that is selected from certain thermosetting resins and thermoplastic resins in column 4, lines 25-42, none of the resin materials disclosed are one of the five resin types now recited in Claim 1. Accordingly, the Lachman patent fails to anticipate the invention as now claimed and withdrawal of the rejection is respectfully requested.

#### Declaration, 35 USC 1.132

As indicated in the discussion above, it is clear that the invention as now claimed is distinguished over the disclosure of Lachman on the basis of the five types of organic binder

materials recited in the claim. That, in fact, these resins are believed to be unobvious in view of the organic binders disclosed in the patent is believed clear from the comparative evidence submitted in the attached declaration. Table 3 of the declaration provides a contrast of the pH and viscosity stabilities of a comparative slurry within the scope of Lachman and four embodiments of slurries within the scope of the present claims. These results are shown in the following table.

	Comp Exp	Exp 1	Exp 2	Exp 3	Exp 4
	G	C	D	E	F
pH					
Immediately after preparation	6.8	5.8	5.1	4.8	5.9
One month after preparation	6.4	5.9	5.2	5.0	5.9
Three months after preparation	5.9	6.0	5.5	5.0	6.0
Viscosity					
Immediately after preparation	18.6	15.8	16.2	17.1	18.7
One month after preparation	19.9	16.0	16.4	17.5	18.7
Three months after preparation	20.3	16.0	16.5	17.5	18.7

The results in the table above demonstrate that the embodiments of the slurry of the present invention exhibit superior stability both with respect to pH and viscosity over the time periods measured, which degrees of stability are not achieved by the slurry of the comparative experiment within the scope of Lachman. Accordingly, the present invention as claimed is believed unobvious over the Lachman patent.

Claim Rejection, 35 USC 103

Claim 4 stands rejected based on 35 USC 103 as obvious over Lachman, U.S. Patent 4,657,880. This ground of rejection is respectfully traversed.

Claim 4 is directed to a secondary aspect of the invention which is the zeolite content of the claimed slurry. This aspect of the invention is not an aspect upon which applicants depend to distinguish the invention as claimed over Lachman. Rather, as pointed out above, the present invention stands distinct over Lachman on the basis of the organic binder material used to form the slurry. Clearly, since Claim 4 depends on Claim 1 that is believed patentably distinguished over the patent, Claim 4 is believed patentable. Accordingly, withdrawal of the obviousness ground of rejection is respectfully requested.

Claim 4 stands rejected based on 35 USC 103 as obvious over Lachman, U.S. Patent 4,657,880 in view of Guile et al, U.S. Patent 5,716,899. This ground of rejection is respectfully traversed.

The Guile et al patent contains no disclosure which draws the Lachman patent closer to the present invention. (Guile et al discloses inorganic binders, not organic binders.) Accordingly, since dependent Claim 4 is dependent upon a claim believed to be patentable over the prior art, withdrawal of the rejection of the claim is respectfully requested.

Claim 4 stands rejected based on 35 USC 103 as obvious over Lachman, U.S. Patent 4,657,880 in view of Addiego, U.S. Patent 6,004,896. This ground of rejection is respectfully traversed.

The Addiego patent, like Guile et al, contains no disclosure which draws the Lachman patent closer to the present invention. (Addiego also only discloses inorganic binders, not organic binders.) Accordingly, since dependent Claim 4 is dependent upon a claim believed to be patentable over the cited combination of prior art references, withdrawal of the rejection of the claim is respectfully requested.

Claims 8 and 9 stand rejected based on 35 USC 103 as obvious over Beckmeyer et al, U.S. Patent 5,330,945 in view of Lachman, U.S. Patent 4,657,880. This ground of rejection is respectfully traversed.

The Beckmeyer et al patent discloses a method of applying a zeolite/silica washcoat to a monolithic support. While the steps of the claimed process are similar to the steps of present Claim 8, there is, in fact, no teaching or suggestion of the slurry of the invention which is based on the specific organic binder resins set forth in the claim. As is evident from the discussion above concerning the slurry of the invention, the slurry is unique from the viewpoint of its properties and therefore, since Claim 8 is dependent upon the use of the slurry of Claim 1, which is distinguished over the prior art, the process of the claim is believed distinguished over the references. Similarly, Claim 9, as a secondary claim, is believed distinguished over the combined references and withdrawal of the rejection is respectfully requested.

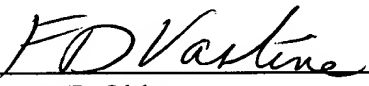
Claim 10 stands rejected based on 35 USC 103 as obvious over Beckmeyer et al, U.S. Patent 5,330,945 in view of Lachman, U.S. Patent 4,657,880 and further in view of Kuma U.S. Patent 5,194,414. This ground of rejection is respectfully traversed

Claim 10 is directed to a secondary aspect of the invention which is the shape of the carrier which is impregnated with the claimed zeolite slurry of the invention. This aspect of the invention is not an aspect upon which applicants depend to distinguish the invention as claimed over Beckmeyer et al in view of Lachman. Rather, as pointed out above, the present invention stands distinct over the references on the basis of the organic binder material used to form the slurry. Clearly, since Claim 10 depends on Claim 8 that is believed patentably distinguished over the patents, Claim 10 is believed patentable. Accordingly, withdrawal of the obviousness ground of rejection is respectfully requested.

It is now believed that the application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

  
Norman F. Oblon  
Attorney of Record  
Registration No.: 24,618

Frederick D. Vastine, Ph.D.  
Registration No.: 27,013



**22850**

TEL: 703-413-3000  
FAX: 703-413-2220